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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/680,828

10/06/2000

Edward J.A. Pope

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58688

7590

11/03/2006

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EXAMINER

MOORE, MARGARET G

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/680,828

Applicant(s)

POPE ET AL.

Examiner

Margaret G. Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 104 to 126 is/are pending in the application.
- 4a) Of the above claim(s) 105-108, 112-114, 116-121, 123 and 126 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 104, 109-111, 115 and 122 is/are rejected.
- 7) ☒ Claim(s) 124 and 125 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's election without traverse of the specific species I. to V. in the reply filed on 8/28/06 is acknowledged.

In view of this election, the Examiner will summarize the claimed process as it includes the specifically elected process species.

The claims are drawn to a process for forming an article comprising silicon carbide, comprising 1) shaping a component by arranging a plurality of fibers to form the component¹, 2) wherein the component is a thermoplastic preceramic polymer material comprising a poly(ethynyl) carbosilane², 3) crosslinking by radiation the thermoplastic preceramic polymer³ and 4) wherein the poly(ethynyl) carbosilane is prepared by reacting sodium acetylide with organochlorosilanes and condensing this reaction product with an excess of an alkali metal⁴. Note that this process does not require an applying step.

The claims that read on the elected invention include claims 104, 109 to 111, 115, 122 and 124.

2. As noted above, applicants have elected that the process in claim 104 further include the process step of claim 124. The process step in claim 124 is allowable over the prior art. Note that this is the same process as that claimed in the parent application, now 6,403,750. This patent does not qualify as prior art against the instant claims nor is an obviousness type double patenting rejection proper. Similarly the process step in claim 125 is allowable over the prior art as this is the same process claimed (and held to be allowable) in 09/782,945, another CIP of 6,403,750. Again, an obviousness type double patenting rejection is not proper. Thus the process in claim 104 when including the process of claim 124 or 125 is allowable. Normally from here the Examiner would extend prosecution and examination on to include the process of claim 126, but this process results in a preceramic material that is different from the elected species in claim 115. As such, for examination purposes, claim 104 is being limited to each of the

¹ The elected species of claim 122.

² The elected species of claim 115.

³ The elected species of claim 109.

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species elected, but having no requirement on the process by which the thermoplastic preceramic polymer material is made.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 104, 109, 110, 115 and 122 are rejected under 35 U.S.C. 102(b) as being anticipated by Chandra et al.

Chandra et al. teach a method of forming acetylenic polysilanes, crosslinking the polysilanes and forming a ceramic material. See for instance the abstract. Particular attention is drawn to Example 7. This example first prepares a poly(ethynyl)carbosilane meeting claim 115 (referred to by patentees as an acetylenic polysilane). The polysilane is made into fibers and fiber samples are placed into a quartz tube. This meets claim 122. The fiber samples are crosslinked by UV irradiation, meeting claims 109 and 110. They are then pyrolyzed to form ceramic fibers. In this manner each of these elected/claimed process steps are met by Chandra et al.

6. Claim 111 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra et al.

Chandra et al. do not specifically teach infrared light radiation as a means of

⁴ The elected species of claim 124.

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crosslinking the acetylenic polysilane. Column 11, line 13 - 15, teaches that, in general, the acetylenic polysilanes can be cured by general methods used to polymerize acetylenes. Radiation by infrared light is a known method of polymerizing acetylenes and as such the skilled artisan would have found it obvious to use such a known and general method in the process of Chandra et al. In this manner claim 111 would have been obvious to one having ordinary skill in the art, in view of the teachings in Chandra et al.

7. Claims 124 and 125 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


8. Keller et al. 335 is cited as being of general interest. This reference teaches a process in which a preceramic polymer material is coated onto a fiber. This could be pertinent to claim 105, which is not under consideration at this time. This reference does not teach or suggest a process in which no application step occurs. Burns et al. is also cited as being of general interest. Column 6, line 48, teaches that the polysilane therein can include acetylenic groups but this reference is not as close to the instant claims as that cited supra. Keller et al. '017 teaches on column 10 that, while UV light is a preferred means of crosslinking acetylenic groups, radiation can occur in other wavelengths of light as well.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Margaret G. Moore
Primary Examiner
Art Unit 1712

mgm
11/1/06